

## How the MPCA addressed EPA's comments regarding the PolyMet draft water quality (NPDES/SDS) permit

### Comments on water quality-based effluent limits

The EPA recommended in several of its comments that the MPCA include water quality-based effluent limits (WQBELs) in the permit for pollutants that are expected to be in the mine's wastewater discharges. Effluent limits are the limits on specific pollutants in the effluent, or discharge, from a particular facility or other source. WQBELs are the limits assigned to discharges to ensure that the body of water receiving the discharge does not exceed water quality standards.

#### EPA Comment 1

*We acknowledge MPCA's consideration in the draft permit of the federal regulations at 40 C.F.R. Part 440 Subparts G, J, and K, including technology-based effluent limits. See permit sections 6.10.44 and 8.1.1. However, the permit does not include water quality-based effluent limits for key parameters and appears to authorize discharges that would exceed Minnesota's federally approved human health and/or aquatic life water quality standards for mercury, copper, arsenic, cadmium, and zinc. This concern would be resolved if the permit included water quality-based effluent limits.*

EPA staff were concerned that the draft permit did not have specific limits for certain pollutants listed in the application. The treatment technology that the mine intends to use (reverse osmosis) will completely remove all pollutants, so the MPCA only included operating limits for sulfate and copper in the original draft permit. The agency added limits for other pollutants to the final permit based on conversations with EPA and comments received during public notice.

**In the final permit:** The MPCA added enforceable operating limits for mercury, cobalt, arsenic, lead, and nickel equal to the water quality standards for those substances, and added language to expressly prohibit discharges that would cause water quality standards to be exceeded.

#### EPA Comment 2

*The permit lacks clear narrative effluent limits such as an unqualified general prohibition on discharges that would cause exceedances of water quality standards. For example, at paragraph 6.16.4, the permit prohibits toxic discharges, but the condition also includes an exception for situations in which technology-based effluent limits apply, as is the case with several of the parameters covered by the draft permit. EPA's concern could be resolved if MPCA establishes water quality-based effluent limits for the*

*authorized discharge and, additionally, removes the qualifying language from paragraph 6.16.4 to clearly prohibit discharges that would cause exceedances of water quality standards.*

The draft permit prohibited toxic discharges but had what the EPA considered conflicting language that could allow for discharges with unacceptably high pollutant levels.

**In the final permit:** The MPCA added clearer language to expressly prohibit discharges that would cause water quality standards to be exceeded, and included a clause that would allow the agency to reopen the permit if the standards were surpassed.

### EPA Comment 3

*The permitting record does not appear to demonstrate that the MPCA considered all the pollutants that were disclosed in the permit application as being present in the proposed discharge when evaluating the need for water quality based effluent limits. Thus, in the absence of WQBELs, there is no assurance that the discharge will meet applicable water quality standards. MPCA should, therefore, consider in its analysis all the pollutants that were presented in the application materials as potentially present in the proposed discharge to determine those WQBELs that are needed in the permit. Further, if MPCA considers a particular parameter to be the key to ensuring the facility will meet all applicable water quality standards, e.g., copper at monitoring station WS074 (permit section 6.10.40) or sulfate at monitoring station WS074 (permit section 6.10.31), the permit should include appropriate WQBELs at monitoring location SD001 to ensure that these internal operating limits result in meeting applicable water quality standards at the point where the discharge is sent to receiving waters.*

The EPA was concerned that the MPCA had not taken into account all the pollutants that could potentially appear in the mine's discharges.

**In the final permit:** The MPCA added enforceable operating limits for several additional substances and clearer language expressly prohibiting discharges that would cause water quality standards to be exceeded. In addition, it added language to the fact sheet that accompanies the permit to demonstrate that it had considered all possible pollutants for the facility.

### EPA Comment 4

*The fact sheet's reasonable potential analysis relies on the assumption that data provided in the application are maximum values without taking into account the potential variability and uncertainty in the discharge from this new source. Under the Addendum to the EPA-MCA National Pollutant Discharge Elimination System Memorandum of Agreement for the Great Lakes Initiative (May 8, 2000), Minnesota committed to "use only alternative statistical procedures for deriving PEQ that meet the standard in 40 C.F.R. Part 132, Appendix F, Procedure 5, Paragraph B.2." To resolve EPA's concern, MPCA should consider that the data provided in the application materials are estimates based on assumptions and*

*modeling outputs and ensure that its reasonable potential analysis is consistent with the procedures in 40 C.F.R. Part 132, Appendix F, Procedure 5.*

The EPA felt that the MPCA had not accounted for variable factors and uncertainty when modeling the facility's potential output. The MPCA and EPA discussed the issue in detail at an in-person meeting on September 25-26, 2018, in the MPCA's St. Paul offices. The MPCA clarified to the EPA's satisfaction how variability was addressed in the permit.

**In the final permit:** Since the issue was clarified to EPA's satisfaction, no change were made to permit. Issue is discussed in fact sheet and the antidegradation analysis attached to the fact sheet.

## EPA Comment 5

*At pages 34-37 of the fact sheet, MPCA states that its decision that water quality-based effluent limits are not needed in the permit relies on the operational limits for sulfate (in milligrams per liter) and copper (in micrograms per liter) at internal outfall WS074. Although these limits are set to low values, including the copper limit that is set to the water quality standard, (calculated by assuming a hardness value of 100 mg/L), there is nothing definitive in the permit or supporting information that justifies a conclusion that meeting these operational targets will result in meeting water quality standards for all the parameters in the permit application. This is especially a concern for mercury, for which the standard is specified in nanograms per liter and the pilot study states that the effectiveness of the treatment system to remove mercury is unknown.*

The EPA was concerned that the permit language would still allow for the violation of water quality standards, especially for mercury.

**In the final permit:** The MPCA added enforceable operating limits for mercury, cobalt, arsenic, lead, and nickel equal to water quality standards for those substances, and added language to expressly prohibit discharges that would exceed water quality standards. It also included a clause that would allow the agency to reopen the permit if the standards were surpassed.

## EPA Comment 6

*The permit requires that no sulfate or copper be added to the discharge after monitoring station WS074, but does not prohibit the addition of any other additives between monitoring station WS074 and the final outfalls. In fact, the permit record shows that the effluent of the water treatment system will require mineral addition prior to its discharge to surface waters to reduce the toxicity due to the low ionic strength of the treated water. This raises two concerns. First, the permitting record includes information showing that available local sources of lime contain aluminum in levels that, if used, will likely result in a discharge that exceeds the applicable water quality standard for aluminum. While MPCA appears assured that higher cost lime containing lower levels of aluminum is available and will be used,*

*to ensure that likely variability in the quality and price of available lime does not result in exceedances of the applicable water quality standard, the permit should include a water quality-based effluent limit for aluminum at the final discharge points or an internal outfall after mineral addition.*

The EPA objected to the possibility that additives that may contain aluminum would be introduced into the discharge after the monitoring point, but before it left the facility.

**In the final permit:** The MPCA changed the permit to expressly prohibit the addition of aluminum between the last monitoring point and the treated water outfall.

## EPA Comment 6A

*Second, in light of the potential for whole effluent toxicity to occur, the permit should include whole effluent toxicity limits at the final discharge point or an internal outfall after mineral addition.*

A facility may meet its permit limits for several individual pollutants, but the remaining substances in the discharge, taken together, may still cause toxicity. This is called whole effluent toxicity, and the EPA wanted the condition addressed in the permit.

**In the final permit:** The MPCA added an enforceable whole effluent toxicity limit to the permit and added discussion of the limit in the permit fact sheet on page 58.

## EPA Comment 7

*EPA is concerned that the permit and supporting materials do not include sufficient information to explain how downstream water will be protected consistent with CWA Section 402(b)(5), 33 U.S.C. § 1342(b)(5), based upon the following considerations, including: (1) downstream receiving water exceed the applicable state and downstream state human health and wildlife water quality standard for mercury, and (2) the pilot study states that the effectiveness of the treatment system to remove mercury is unknown. We note that a downstream tribe, that has “Treatment as a State” and federally approved water quality standards, has notified EPA that the project is likely to contribute to exceedances of its downstream water quality standards, including for mercury. MPCA should ensure that its permit will ensure compliance with downstream state water quality standards.*

The EPA felt the permit did not sufficiently protect waters downstream of the facility from mercury in the mine's discharge.

**In the final permit:** The MPCA added an enforceable operating limit for mercury equal to the mercury water quality standard for the Lake Superior Basin, and added language to expressly prohibit discharges that would exceed water quality standards. It also included a clause that would allow the agency to

reopen the permit if standards are surpassed. The agency also added the requirement to the permit for a mercury minimization plan.

## Comments on effluent limitations guideline calculation

### EPA Comment 1

*The draft permit does not include all the requirements of 40 C.F.R. 440, Subparts G, J, and K that apply to this proposed project, including a restriction on discharge volume that is in conformance with 40 C.F.R. § 440.104(b)(2)(i) and that is equivalent to the annual net precipitation for the site.*

*Permit sections starting at 6.10.1 include a formula that retrospectively calculates that allowable discharge flow and includes a “carryover” amount defined as “the difference between the allowable annual discharge volume and the actual volume discharged” which acts as a “credit” that the permittee is allowed to apply to the following calendar year. This “carry over credit” appears to be in contradiction to the applicable regulatory definitions of “annual precipitation,” “annual evaporation,” and “mine drainage” at 40 C.F.R. § 440.132(b), (h). We recommend setting a numeric limit on flow, including this limit in the permit, and ensuring that it is consistent with 40 C.F.R. § 440.104(b)(2)(i).*

EPA wanted a clear requirement on the annual volume of discharge allowed from the facility, to ensure that no unauthorized wastewater is added to the system.

**In the final permit:** The MPCA added an annual flow limit to the permit that accounts for the facility's wastewater amounts, rain and snowmelt, and evaporation.

### EPA Comment 2

*In addition, we recommend that MPCA consider the applicability of — and inclusion of — effluent limitations contained in 40 C.F.R. § 440.12 and 40 C.F.R. Part 440, subpart A (iron ore), as the project discharge could include legacy pollutants.*

EPA recommended that we add the technology-based effluent limits (TBELs) for the iron ore category; the draft permit already included TBELs for the copper ore, nickel ore, and platinum ore categories. TBELs set the minimum level of effluent quality using the available treatment technology in a specific industry nationwide. These federal TBELs are an additional layer of effluent limits that augment the limits set to protect state water quality standards. The EPA felt that the iron ore TBELs could be applicable to this project, because the facility used to be an iron ore mine and legacy pollutants could appear in the mine's wastewater.

**In the final permit:** The MPCA added a technology-based effluent limit for dissolved iron to the permit and added discussion describing iron-ore subcategory requirements to the fact sheet on pages 41 and 44.

## Comments on permit enforceability

### EPA Comment 1

*The permit as written may preclude enforcement per CWA Section 402(k), 33 U.S.C. § 1342(k), for pollutants disclosed during the application process but for which there are no limitations, or for water quality standards excursions where the limitation provided in the permit appears to be greater than the applicable state water quality criterion.*

The EPA felt the permit needed specific limits to be enforceable at the federal level.

**In the final permit:** The MPCA added enforceable operating limits for additional pollutants that could appear in the mine's wastewater —mercury, cobalt, arsenic, lead, and nickel — equal to the water quality standards for those substances, and added language to expressly prohibit discharges that would cause water quality standards to be exceeded.

### EPA Comment 2

*The permit contains "operating limits" on an internal outfall that many not be enforceable by EPA, citizens, and potentially MPCA and, thus, may be ineffective at protecting water quality under the Clean Water Act (see 40 C.F.R. §§ 122.4(a), (d). Specifically, the permit includes an internal outfall operating "target" and "limit" for sulfate based on a voluntary commitment by PolyMet to meet a 10 mg/L sulfate limit (permit sections 6.10.34-35) and an internal operating "limit" for copper that MPCA states will ensure compliance with the chronic water quality standard for copper (permit section 6.10.43). We understand that MPCA's authority to enforce such a provision may rest on state authority, outside the scope of CWA. MPCA should revise the permit as necessary to ensure that all NPDES requirements are enforceable under the CWA.*

*Additionally, the internal "operating limit" for copper, at 9.3 micrograms per liter at permit section 6.10.43, is equivalent to the water quality criterion for copper. However, permit section 6.10.44 appears to authorize higher discharge concentration for copper based on the TBEL that appears to apply at outfall SD001 (permit section 8.1.1). This creates a conflict as to which limit is applicable and enforceable against the permittee. MPCA should revise the permit to include a water quality-based effluent limit for copper.*

The EPA felt the permit needed specific limits to be enforceable at the federal level, and that the use of operating limits and TBELs was confusing.

**In the final permit:** The MPCA added enforceable operating limits for additional pollutants that could appear in the mine's wastewater —mercury, cobalt, arsenic, lead, and nickel — equal to the water quality standards for those substances, and added language to expressly prohibit discharges that would cause water quality standards to be exceeded. It also included a clause that would allow the agency to

reopen the permit if standards are surpassed. In addition, MPCA updated the fact sheet on pages 42-44 to explain the relationship between operating limits and TBELs.

### EPA Comment 3

*MPCA plans to transfer the administratively continued, expired Cliffs Erie, LLC permit (and associated enforcement documents) for the existing tailings basin to an affiliated corporate entity of PolyMet. It appears that this arrangement could result in the permittee holding multiple permits covering the same discharge for some time after the effective date of the NorthMet permit. This creates confusion over which discharges are covered by each permit and may complicate or preclude enforcement of permit requirements under either permit, for example if legacy pollutants do not attenuate as predicted (permit section 6.10.45).*

EPA felt that there would be confusion because the existing facility has a permit that will still be in effect and will overlap with the new permit. When the new facility has been operating for the 18 months, the old permit will be terminated. The MPCA clarified the issue to the EPA's satisfaction in conference calls on February 13, 2018 and March 5, 2018 and in the September 25-26, 2018 in-person meeting in St. Paul.

**In the final permit:** Since the issues was clarified to EPA's satisfaction, no changes were made to the permit.

### EPA Comment 3A

*Additionally, the Permit Fact Sheet (p. 17) acknowledges continuing seep discharges from the tailing basin. As such, the draft permit and/or supporting documentation should clearly assign responsibility for seep discharges by specifying those applicable portions of the Cliffs Erie, LLC permit (MN0054089), the Cliffs Erie, LLC Consent Decree with MPCA, and the draft NorthMet permit. Specifically, the permit should include: (a) a list of known seeps (including coordinates and/or sections) that are authorized to discharge from the tailings basin, (b) a map identifying seeps and their relationship to the planned containment system, (c) monitoring and applicable limits for these seeps, because, as noted in the fact sheet (p. 17), seep discharges "contributed to exceedances of permit effluent limitations established in the NPDES/SDS permit," and (d) appropriate interim authorization, limits, and requirements for tailings basin seeps until such a time as seeps are fully contained and cease to reach surface waters.*

EPA was concerned about the lack of specific limits in this permit on existing seepages from the tailings basin.

**In the final permit:** The existing seepages from the tailings basin are addressed by the Consent Decree under the existing and separate permit for the tailings basin. PolyMet is responsible for complying with this Consent Decree. The permit already included language prohibiting a direct discharge from the

seepage capture system. The MPCA added additional construction and design requirements for the seepage capture system and updated language regarding the system's operation, to ensure no discharge from seepage.

## EPA Comment 4

*MPCA plans to issue general permit coverages for construction stormwater discharges prior to commencement of construction. Neither the draft individual permit, nor any supporting documentation clearly delineates what activities are excluded from coverage under a general permit. Further, the stormwater general permit would authorize discharge from the draining of over 900 acres of wetlands, which are dominated by peat bogs. This activity is expected to release significant amounts of mercury into downstream navigable waters. While MPCA has acknowledged and addressed such discharges in its peat mining permits (and in verbal comments regarding this project), nothing in the permitting record demonstrates that this issue has been addressed or even considered.*

EPA noted that the permit didn't address issues of construction stormwater. The MPCA regulates construction sites to ensure that rain and snowmelt runoff does not carry pollutants into nearby lakes, rivers, and wetlands. Construction site owners and operators are required to install barriers and other features to keep stormwater on site. The construction stormwater requirements are not included in this permit, but the mine's construction work will be covered under the MPCA's construction stormwater general permit that went through its own public input and approval process. PolyMet has submitted detailed stormwater pollution prevention plans (SWPPPs) as required by the general permit. These plans have been reviewed and approved by the MPCA. The MPCA clarified the issue to the EPA in the September 25-26, 2018 in-person meeting and in an October 22, 2018 conference call.

**In the final permit:** Since the issue was clarified to EPA, no changes were made to the permit. The construction stormwater general permit went through its own approval and public input process.

## EPA Comment 4A

*There is no provision in the construction stormwater general permit for addressing specific water quality standards issues. Thus, the draft permit (and associated permitting scheme) appears to leave mercury from this aspect of the project wholly unregulated. We suggest identifying what is intended to be covered under the stormwater general permit and evaluate whether there is reasonable potential for discharges from activities covered under the stormwater general permit to cause or contribute to excursions from water quality standards. If there is such reasonable potential, coverage under the stormwater general permit would not be appropriate. Rather this discharge, with appropriate water quality based effluent limits, could be covered under the NorthMet permit or another individual permit.*

EPA was concerned that coverage under Minnesota's general construction stormwater permit does not appropriately address mercury in construction stormwater from the project.

**In the final permit:** Since the issues was clarified to EPA's satisfaction, no changes were made to the permit. The MPCA's construction stormwater general permit went through its own public input and approval process. The MPCA clarified the issue to the EPA's satisfaction in the September 25-26, 2018 in-person meeting and in an October 22, 2018 conference call.

The construction stormwater general permit required Polymet to prepare a stromwater pollution prevention plan (SWPPP) to demonstrate how construction stormwater will be controlled with practices proven to reduce pollutants such as mercury. Polymet submitted a SWPPP that was reviewed and approved by MPCA staff. A large percentage of the construction stormwater generated at the site will be routed to the tailings basin and ultimately be treated through the wastewater treatment system including the reverse osmosis system. The remainder of the construction stormwater will be treated in accordance with the MPCA approved SWPPP.

## EPA Comment 5

*Permit section 6.10.17 does not allow the permittee to discharge any process wastewater from the mine site to the surface waters. However, it is not clear how compliance with this condition will be evaluated. Under 40 C.F.R. § 122.44(i), NPDES permits must include monitoring requirements "to assure compliance with permit limitations," which include among other things, "the mass (or other measurement specified in the permit) of each pollutant limited in the permit" and "the volume of effluent discharged from each outfall." We recommend that the permit include monitoring requirements and conditions against which compliance can be objectively measured. We have similar concerns with other provisions at permit sections 6.10.26, 6.10.78, 6.11.2, 6.11.9, 6.12.2, and 6.15.11.*

EPA was concerned about inadvertent discharges, particularly through seepage. The seepage capture system that the company will install on the site uses pumping and barriers to establish an inward gradient, so inadvertent discharges are avoided by drawing the seepage back toward the capture system.

**In the final permit:** The MPCA changed the permit to clarify how the inward gradient system works and to provide more construction details. The issue is also addressed by revised "prohibition of discharge" language and additional design and construction requirements.

## Comments on decision-making procedures

### EPA Comment

*The draft permit states that certain plans, reports, and other actions are effective parts of the permit upon submittal by the permittee, making them de facto permit modifications that, in some instances, are likely to be major modifications subject to 40 C.F.R. § 122.62 (for example, see permit section 6.10.38). EPA is concerned that the permit allows both the permittee and MPCA to modify the permit without following the public process for major permit modifications under 40 C.F.R. § 122.62. Permit modifications that do not follow federal regulations may be unenforceable, may cause confusion for*

*regulators and public over what is considered by the permit, and therefore would not ensure compliance with the CWA (see 40 C.F.R. § 122.4 (a)).*

*Although MPCA may wish to require the permittee to undertake immediate corrective action in appropriate circumstances, EPA recommends that MPCA eliminate those permit provisions that make permittee-submitted plans, reports, and other actions immediately effective parts of the permit. We recommend that, instead, MPCA employ appropriate enforcement responses and its authority to modify permits under Minn. R 7001.0170 and 40 C.F.R § 122.62, as necessary.*

The EPA was concerned that the permit would allow the company to make major modifications to its facility without them being reviewed by both regulators and the public.

**In the final permit:** The MPCA added language in the permit to indicate that any proposed modifications to the facility would be reviewed by MPCA to determine whether a modification to the permit, including public notice, may be required. The permit also now requires MPCA review and approval for several additional actions.

## Other EPA Recommendations

The EPA letter included several comments that EPA identified as not major issues, but recommendations “to improve the clarity and accuracy of the permit.” These recommendations were all either addressed by revisions to the final permit and/or fact sheet, were already included in the draft permit documents or were determined by the MPCA, after deliberation, to be unnecessary for the final permit. The recommendations and MPCA responses are summarized below.

### EPA Recommendation 1

*The draft permit contains no limits for CBOD, TSS, pH, fecal, percent BOD/TSS reductions at the sewage treatment stabilization pond internal waste stream monitoring location WS009. Also, the permit contains no limits for CBOD, fecal coliform, or percent BOD/TSS reductions at Outfall SD001. We also note that there does not appear to be a reasonable potential discussion regarding the stabilization pond. MPCA should evaluate whether effluent from the stabilization pond will cause or contribute to excursions from water quality standards. We also recommend including reporting requirements, such as weekly maintenance observations, for the stabilization pond.*

MPCA revised the fact sheet to explain why the recommended limits were not necessary to protect downstream water quality. The sanitary sewage generated at the facility (WS009) is routed to a stabilization pond system for treatment and ultimately discharges to the tailings basin. The fact sheet describes that a very large amount of dilution is provided by tailings basin and the effluent discharge from the tailings basin is treated through the reverse osmosis treatment system prior to discharge. Given that the sanitary waste is treated first by the stabilization pond system and ultimately by the

wastewater treatment system, it is highly probable that effluent concentrations of these parameters would be exceedingly small and it is unlikely that specific monitoring of the WWTS effluent would be capable of detecting them.

## **EPA Recommendation 2**

*The permit (at p. 9 and Table 2.1) states that the WWTS discharge will be distributed to various tributaries to minimize hydrologic or ecologic impacts, but the permit does not clearly describe the relationship between the flow in these outfalls and the allowable discharge (permit section 6.10.1 - 6.10.9). MPCA should include provisions in the permit that show how the permittee and MPCA will determine the distribution of flows to Outfalls SD002-SD0011.*

The draft permit already contained language describing that the “allowable discharge” requirement applies to “Surface Discharge Stations SD002-SD011”. The allowable discharge requirement is a federal Clean Water Act requirement that limits the annual volume of water that may be discharged. Because the permit already included the recommendation, MPCA determined that no revision to the permit was needed. Also see response to EPA Comment 1 in the “Comments on effluent limitations guideline calculation” section above. More detail on this issue is included in our response to EPA’s comment 5 on enforceability above.

## **EPA Recommendation 3**

*The permit (at p. 11) discusses the “controlled discharge” from the stabilization pond to the floatation tailings basin (FTB). The permit should explain how the controls on this discharge will function as enforceable requirements of the permit.*

MPCA revised the final permit to include language that expressly prohibits direct discharge from the stabilization ponds and requires routing of all wastewater from the stabilization ponds to the tailings basin. This is an enforceable requirement of the permit.

## **EPA Recommendation 4**

*Permit section 6.10.12 does not allow cells 2E and 1E to be combined until the floatation tailings basin seepage collection system is “fully operating” but it is not clear how this term is defined. MPCA should define “fully operating” to ensure that these permit requirements can be adequately monitored and enforced.*

MPCA revised the permit to clearly define what is meant by the term “fully operating.”

### **EPA Recommendation 5**

*Permit section 6.10.27 requires the permittee to maintain a system of paired monitoring wells and piezometers (one internal and one external to the FTB seepage containment system). If these are established monitoring points already included in the permit, MPCA should include references to the monitoring numbers here. If these monitoring points have not yet been established, MPCA should create and include them in the monitoring table along with the type and frequency of data collection.*

The paired monitoring wells and lysimeters were listed on pages 25 -28 of the final permit. In addition, they listed in table format as “Groundwater Monitoring – FTB Seepage Containment System Performance” in the draft fact sheet where the type and monitoring frequency was defined. MPCA determined no revisions to the final permit were needed because the stations were already listed in the permit.

### **EPA Recommendation 6**

*Permit section 6.10.26 says “Direct discharge to surface waters from the FTB Seepage Containment System is prohibited.” It is unclear to EPA how MPCA would implement the prohibition of “direct discharge.” EPA recommends that the permit be clarified to prohibit any “discharge of pollutants to surface waters” consistent with the Clean Water Act.*

MPCA revised the permit to require construction of the tailings basin seepage containment system to meet a specified design and be operated to maintain a defined “inward gradient” that will ensure capture of seepage and prevent the discharge of pollutants to surface waters.

### **EPA Recommendation 7**

*Permit section 6.10.49 requires sampling at SW003, SW005, SW006, SW007, and SW020 to begin 18-months following initial operation of the WWTS. MPCA should begin sampling upon permit issuance so that a baseline can be established at these locations.*

Each of these monitoring locations is required to be sampled by PolyMet as part of the Consent Decree that is associated with the existing (and separate) NPDES/SDS permit for the tailings basin. Requiring this same monitoring in the final NorthMet permit would be duplicative. Because the monitoring is already required under a separate enforceable permit, MPCA determined there was no need to duplicate this monitoring in the final permit.

## **EPA Recommendation 8**

*Permit section 6.11.11 prohibits the discharge of PCBs. As this is a legacy mine site, we recommend that MPCA work with the permittee to determine whether the site contains PCBs. If it is determined that the site does not contain PCBs, MPCA should have the permittee certify this finding. Similarly, if PCBs are present on site, then MPCA should revise the permit to include monitoring requirements to evaluate compliance with the prohibition.*

The referenced PCB language is standard “boilerplate” language that goes into all industrial NPDES/SDS permits. The language has gone through MPCA internal legal review to ensure that it is appropriate and enforceable. Additionally, the potential for PCB-containing devices to be located on site was thoroughly addressed in the LTV Closure submitted to the MPCA and DNR as part of site closure activities. The MPCA determined there was no need to carry forward this recommendation into the final permit.

## **EPA Recommendation 9**

*We recommend that the permit include at the beginning (for example, p. 1) a citation to the federal and state authorities pursuant to which the discharges from the facility are allowed.*

The MPCA utilizes a standard permit template for this, and all, NPDES/SDS permits that has been reviewed by legal counsel to ensure that it is grounded in federal and state authorities. The MPCA determined there was no need to carry forward this recommendation into the final permit.

## **EPA Recommendation 10**

*There are several references in the permit and fact sheet where the reader is directed to the permit application for more information. For example, one reference to the 3d volume of the October 2017 permit application references a document over 500 pages long (see permit p. 8). We suggest including a location for references such as these throughout the permit to facilitate the reader’s ability to access the information.*

The MPCA agrees that references to the permit application can be confusing. As a result the MPCA seldom, if ever, includes specific references to the permit application or application references in the body of the NPDES/SDS permits. This approach is reflected in the final permit.

## **EPA Recommendation 11**

*Permit section 6.10.21 allows “agency pre-approved adaptive management or mitigation measures.” We recommend including a link or reference to where these measures can be located.*

The MPCA revised the permit to specify that MPCA must review and approve proposals for adaptive management or mitigation before they can be implemented. Because the proposed adaptive management or mitigation measure does not yet exist, it is not possible to include a link to it in the final permit.

### **EPA Recommendation 12**

*The maps and figures in the permit and fact sheet are often difficult to read. If clearer versions of these cannot be included, we suggest including a reference to where the original maps and figures can be viewed in hard copy or on line.*

The MPCA updated the final permit to include maps and figures created from original documents with a higher resolution to improve their readability.